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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/677,262

10/03/2003

Mutsumi Yano

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8747

7590

10/04/2004

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EXAMINER

THOMAS, ERIC W

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/677,262

Applicant(s)

YANO ET AL.

Examiner

Eric W Thomas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 8-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Election/Restrictions

1. Applicant's election of invention I in the reply filed on 9/7/04 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

3. Claims 3-4 are objected to because of the following informalities:
Claim 3, line 2, change "wherein additive" to --wherein at least one additive--.
Claim 4, line 2, change "the additive metal content" to --the at least one additive metal content--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kumagai et al. (US 3,825,802).

Kumagai et al. disclose in fig. 1, an electrolytic capacitor comprising an anode of nitrogen doped titanium (col. 2 lines 56-65); and a dielectric formed by anodically oxidizing the anode (col. 3 line 25-30) on a surface of the anode.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fife et al. (US 6,674,635) in view of Kumagai et al. (US 3,825,802).

Fife et al. disclose a electrolytic capacitor comprising a titanium-aluminum alloy anode (col. 3 lines 60-66) that is anodically oxidized to form a dielectric layer on the anode (col. 4 lines 60-66).

Fife et al. disclose the claimed invention except for the titanium-aluminum alloy is doped with a nitrogen.

Kumagai et al. teach the use of a nitrogen doped valve metal. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the capacitor of Fife et al. by doping the anode with a nitrogen as taught by Kumagai et al, since such a modification would increase the breakdown voltage, and improve the life of the capacitor.

Regarding claim 2, Fife et al. disclose the at least one metal is an aluminum.

Regarding claim 3, Fife et al. disclose the claimed invention except for the additive metal content of the titanium alloy is 5 wt% or below. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the anode have an additive metal content of the titanium alloy 1 wt %, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 4, Fife et al. disclose the claimed invention except for the additive metal content of the titanium alloy is 0.05 to 2.5 wt%. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the anode have an additive metal content of the titanium alloy 1 wt %, since it has been

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held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

9. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumagai et al. (US 3,825,802).

Kumagai et al. disclose the claimed invention except for the nitrogen is doped in the titanium in a range of 0.01 to 5 wt. % (Applicant should note col. 3 lines 18-20). It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the anode having 1 wt. % nitrogen doped in the titanium, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 6, Kumagai et al. disclose the claimed invention except for the nitrogen is doped in the titanium in a range of 0.02 to 1 wt. % (Applicant should note col. 3 lines 18-20). It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the anode having 1 wt. % nitrogen doped in the titanium, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

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1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1-4,7 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 4, 6, 11 of copending Application No. 10/611969 in view of Kumagai et al. (US 3,825,802).

This is a provisional obviousness-type double patenting rejection.

Regarding claim 1, '969 discloses in claim 6, an electrode comprising a titanium alloy and a dielectric layer formed on the surface of the electrode by anodizing the electrode.

'969 discloses the claimed invention except for the electrode is doped with a nitrogen.

Kumagai et al. teach the use of a nitrogen doped valve metal. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the capacitor of Fife et al. by doping the anode with a nitrogen as taught by Kumagai et al, since such a modification would increase the breakdown voltage, and improve the life of the capacitor.

Regarding claim 2, '969 discloses the additive metal is an aluminum (see claim 4).

Regarding claim 3, '969 discloses the additive metal content of the titanium alloy is 2.5 wt percent (see claim 6).

Regarding claim 4, '969 discloses the additive metal content of the titanium alloy is 2.5 wt percent (see claim 6).

Regarding claim 7, '969 discloses the dielectric is a fluorine doped dielectric layer (as suggested in claim 11).

Conclusion

In order to ensure full consideration of any amendments, affidavits, or declaration, or other documents as evidence of patentability, such documents must be submitted in response to this Office action. Submissions after the next Office action, which is intended to be a final action, will be governed by the requirements of 37 CFR 1.116 which will be strictly enforced.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric W Thomas whose telephone number is 571-272-1985. The examiner can normally be reached on M,Tu,Sat 9 am - 9:30 pm; W, Th, F 6 pm -10:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-1984. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



9/28/04

Eric W Thomas
Examiner
Art Unit 2831

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